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November 16, 1992

BY HAND

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: MM Docket No. 87-268
Advanced Television Systems

Dear Ms. Searcy:

On behalf of Paramount Stations Group Inc., I am transmitting herewith an original and nine copies of its comments in response to the Commission's Second Further Notice of Proposed Rule Making in the above-referenced proceeding.

Respectfully submitted,

Barbara K. Gardner

Barbara K. Gardner

Enclosures

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List A B C D E

3621M (4)

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Before The
Federal Communications Commission

In the Matter of

Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service	)))	MM Docket No. 87-268

To: The Commission

COMMENTS OF
PARAMOUNT STATIONS GROUP INC.

PARAMOUNT STATIONS GROUP INC.

By: Daniel Victor

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November 16, 1992

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SUMMARY

Paramount Stations Group Inc., the parent of six UHF stations, endorses the ATV allotment objectives articulated by the Commission; namely, that the ATV channel allotment plan be guided by the principle of equalizing ATV coverage areas of all ATV stations within each local market wherever technologically feasible, and that ATV conversion channels be allocated exclusively from the UHF band. Paramount opposes any allotment plan that seeks to replicate existing NTSC service areas because such a plan needlessly perpetuates the existing coverage disparities between competing UHF and VHF stations. These coverage disparities arise solely out of the signal propagation limitations of UHF-band NTSC signals relative to VHF-band NTSC signals. With the advent of ATV, the Commission has a unique opportunity to achieve coverage parity for all local broadcast stations regardless of whether they currently broadcast in the UHF or VHF band.

Paramount also urges the Commission to adopt ATV allotment approaches that minimize the possibility of ATV-to-ATV and ATV-to-NTSC co-channel interference. The Commission's goal of maximizing ATV service areas can be achieved only if ATV allotment methods take into account potential interference to both ATV and NTSC co-channel stations.

Finally, Paramount encourages the Commission to specify for Zones II and III less stringent ATV minimum co-channel spacing requirements than the standards applicable in Zone I, as is the case for NTSC service. The use of minimum co-channel spacing requirements derived from Zone I as the basis for determining ATV power and height assumptions in Zones II and III will needlessly curtail the broadcast reach of ATV facilities in those zones.

3621M (4)

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In the Matter of

Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service	)))	MM Docket No. 87-268

To: The Commission

COMMENTS OF
PARAMOUNT STATIONS GROUP INC.

Paramount Stations Group Inc. ("Paramount")[1/] hereby files the enclosed comments in response to the Commission's Second Further Notice of Proposed Rulemaking, FCC 92-332 (released August 14, 1992) ("Second NPRM"), in the captioned proceeding.

I. ATV ALLOTMENT OBJECTIVES

A. Elimination of the UHF/VHF Disparity

Paramount applauds the primary objectives for an ATV allotment methodology articulated by the Commission in the Second NPRM; namely, to accommodate all eligible

1/ Paramount is the parent of the licensees of UHF television stations WDCA-TV, Washington, DC; WLFL-TV, Raleigh, NC; WTXF, Philadelphia, PA; KRRT, Kerrville (San Antonio), TX; KTXA, Arlington (Dallas-Ft. Worth), TX; and KTXH, Houston, TX.

broadcasters in the award of ATV licenses while at the same time maximizing the service areas of ATV stations. Towards that end, Paramount endorses the Commission's tentative view that the service replication/maximization objective proposed by the Association for Maximum Service Television, Inc. and others (Second NPRM at ¶ 12) is not only impracticable, but at odds with what should be the primary objectives of the ATV allotment process -- accommodation of all eligible broadcasters and maximization of their service areas.

In particular, it is Paramount's view that an ATV allotment approach the primary goal of which is to replicate existing NTSC coverage areas is contrary to the public interest because it needlessly perpetuates the technological limitations of the present intermixed NTSC Table of Allotments.[2/] The Commission should remain mindful of the fact that the existing coverage disparities between competing UHF and VHF stations arise solely out of the

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2/ See comments of Paramount Stations Group Inc., letter of James D. Boaz, President, to Donna M. Searcy dated January 16, 1992.

signal propagation limitations of UHF-band NTSC signals relative to VHF-band NTSC signals. Indeed, in recognition of the fact that its adoption in 1952 of an intermixed nationwide NTSC Table of Allotments created technological and hence economic disparities between competing television broadcasters[3/], the Commission subsequently adopted a host of policies designed to minimize the "UHF handicap" that resulted.[4/] In 1962, Congress enacted the All-Channel Receiver Act for the same reason,[5/] and in 1978 directed the FCC to devise a plan to make UHF comparable to VHF.[6/] Thus, the UHF-VHF coverage disparity never reflected an affirmative Commission or Congressional policy, but rather was viewed as an unfortunate, but unavoidable

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3/ Sixth Report and Order in Dockets 8736, 8975, 8976, 9175, 41 FCC 148 (1952).

4/ See, e.g., 21 F.C.C. 2d 245, 20 F.C.C. 2d 793 (1970), 43 F.C.C. 2d 395 (1973), 62 F.C.C. 2d 164 (1976) (tuner and receiving antenna improvements mandated); 100 F.C.C. 2d 74, 92-94 (1985) (national multiple ownership audience reach cap adopted with 50% UHF discount).

5/ Pub. L. No. 87-529, 76 Stat. 150 (July 10, 1962).

6/ S. Rep. No. 1043, 95th Congress, 2d Session (1978).

accommodation to then-existing technology limitations -- a detriment to UHF broadcasters and to the viewing public which should be ameliorated to the extent feasible.[7/]

With the advent of ATV, the Commission has a unique opportunity to achieve, to the extent practicable, coverage parity in local communities for all local broadcast stations without regard to whether the stations currently broadcast in the UHF or VHF band. Coverage parity of UHF and VHF stations is most assuredly in the public interest. Having a more comparable audience reach will enable UHF broadcasters to compete more effectively for advertising dollars in their communities of license. This, in turn, will result in increased revenues for UHF stations, permitting them to devote greater resources to locally-originated news and public affairs programming and thereby to serve the public interest more effectively. In addition, UHF-VHF coverage parity should be a goal of the FCC's ATV allotment policy because the enhancement of competition in the broadcast

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7/ See, e.g., Improvements to UHF Television Reception, 70 F.C.C. 2d 1720 (1978), 90 F.C.C. 2d 1121 (1982).

industry properly remains a fundamental public policy objective of the Commission.[8/]

B. Allocation of ATV Channels Exclusively From the UHF Band

For these reasons, Paramount also endorses the Commission's proposal that ATV conversion channels be allocated, to the extent possible, exclusively from the UHF spectrum. If ATV station parity is to be an objective of the ATV scheme, then it follows that ATV channels must be allocated from either the UHF or VHF band, but not from both. Since the VHF band has too few channels to accommodate all initially eligible broadcasters, the logical -- indeed, the only -- alternative is the UHF band. In addition, use of a single band should promote efficiencies in the manufacture of television transmission and reception equipment.

8/ Review of the Commission's Regulations Governing Television Broadcasting, 7 FCC Rcd 4111, 4113-15 (1992).

C. Establishment of Interference-Free Minimum ATV Service Areas

In the Second NPRM at ¶15, the Commission articulated a means of implementing the goal of maximization of ATV service areas: establishment of an 85-90km minimum ATV service area as measured from a station's transmitter site. Paramount favors implementation of this objective. However, the Commission's proposed allotment process fails to take into account potential interference from inadequately spaced ATV or NTSC co-channel stations, and would make achievement of this objective more illusory than real.

1. ATV-to-ATV Co-Channel Interference: The Commission has emphasized that one important objective of maximizing the service area of all ATV allotments is to "enable ATV stations to serve geographic areas that encompass their communities of license and surrounding market areas." Second NPRM at ¶15. Unless the minimum ATV service area is interference-free, as well as noise-free, that objective will be thwarted.

For example, as the attached declaration of Paramount's Consulting Electronics Engineer, Bernard Segal, indicates, an ATV station situated in Philadelphia would, under the allotment methodology on which the Commission has based the tentative Table of Allotments reproduced in the Second NPRM, interfere significantly with ATV service originating from a

co-channel station situated in Washington, D.C. Indeed, such interference could be expected to reduce the currently existing service area of such Washington, D.C. station by roughly 2480 square kilometers, seriously impairing receipt of such station's ATV signal by approximately 1,271,780 people who currently receive the NTSC signal free of interference.

2. Transitional NTSC-ATV Co-Channel Interference: In addition to attempting to minimize potential ATV-to-ATV interference, the Commission should also choose allotment approaches that will reduce the possibility of ATV-to-NTSC co-channel interference during the transition period. For example, as the attached Engineering Statement also demonstrates, interference caused to Paramount's present Philadelphia station, operating on NTSC Channel 29, by the co-channel ATV operation in Washington, D.C. contemplated by the Commission's Sample Table of Allotments will affect 1,167,000 persons in 8,370 square kilometers.

Accordingly, if maximization of ATV service areas is to have its greatest possible benefit to the viewing public, the Commission's allotment methodology must minimize the potential impact of interference to both ATV and NTSC co-channel stations.

In summary, Paramount Stations Group endorses the views expressed by the Commission in the Second NPRM that the ATV channel allotment plan be guided by the principle of equalizing ATV coverage areas of all ATV stations within each local market wherever technologically feasible, and that ATV conversion channels be allocated, to the extent possible, exclusively from the UHF band. In addition, the Commission's allotment methodology should maximize ATV service areas on an interference-free basis.[9/]

II. SPACING REQUIREMENTS FOR ZONES II AND III

In paragraph 30 of the Second NPRM, the Commission requests comment on whether it should specify alternative spacing requirements for Zones II and III, as is the case for NTSC service. Paramount urges the Commission to do so.

9/ For example, the Commission should explore fine-tuning its allotment methodology by using computer programs that take account of actual terrain conditions in lieu of using average terrain figures, as is the case with NTSC.

The use of minimum co-channel spacing requirements derived from Zone I as the basis for determining ATV power and height assumptions in Zones II and III needlessly curtails the broadcast reach of ATV facilities in those zones, thereby failing to implement the service area maximization objective embraced by the Commission. Zones II and III do not have the population density of Zone I; additionally, Zone III has signal propagation characteristics different than those of Zones I and II. There is no public policy justification for imposing on Zones II and III the more limited spacing requirements of Zone I when there exist no demographic, geographic or general meteorological conditions common to the three zones.

Preliminary studies carried out by Paramount's Consulting Electronics Engineer indicate that if the Commission uses in Zones II and III broadcast power and height assumptions based on the spacing requirements of Zone I, the typical noise-limited (i.e, grade B equivalent) ATV contour likely to result in Zones II and III will be 10 miles smaller than exists under current NTSC Zone II and III spacing requirements. (See Engineering Statement of Bernard Segal, Figures 2 and 3). This significant reduction in signal coverage cannot be justified merely by the administrative convenience of specifying uniform nationwide spacing

requirements. Thus, a reduction of this magnitude is contrary to the primary objective of the Commission's ATV allotment process -- maximization of ATV service areas.

Such a reduction in service area would be significant. For example, in the cases of Paramount stations KTXA (Zone II) and KTXH (Zone III) it would eliminate 4850 and 5730 square kilometers of coverage, affecting 76,200 and 90,700 people respectively. (See Engineering Statement of Bernard Segal, pages 4-6). Such a diminution in service would discourage the public's acceptance of ATV. Viewers who can expect to lose access to a station's ATV signal when they enjoy access to the same station's NTSC signal will justifiably be reluctant to switch to the new technology.

In addition, a reduction in audience reach will penalize Zone II and III stations by eroding their advertising base. This, in turn, will negatively impact profitability and the ability to provide public service programming.

The use of more relaxed ATV spacing requirements in Zones II and III, resulting as it will in increasing the broadcast reach of ATV stations located there, serves the public interest. The maximization of all eligible stations' ATV coverage is an important objective of the ATV allotment process. Failing to implement this objective wherever possible will lessen the competitiveness of weaker UHF

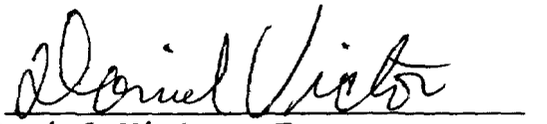
stations, thereby making such stations less fiscally viable. Financially strong stations are able to commit greater resources to public service, and further the public interest objectives identified by the Commission.

Conclusion

For the foregoing reasons, Paramount urges the Commission to (i) adopt an ATV allotment policy that eliminates the existing UHF-VHF coverage disparity; (ii) allocate ATV channels from the UHF spectrum exclusively; (iii) take into account potential interference to both ATV and NTSC co-channel stations in formulating its allotment methodology; and (iv) specify less stringent ATV spacing requirements for Zones II and III.

Respectfully submitted,

PARAMOUNT STATIONS GROUP INC.

By: 

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November 16, 1992

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CONSULTING ELECTRONICS ENGINEERS
WASHINGTON, D.C. 20036

ORIGINAL

ENGINEERING STATEMENT
IN SUPPORT OF COMMENTS
OF PARAMOUNT STATIONS GROUP INC.
SECOND FURTHER NOTICE OF PROPOSED RULE MAKING
MM DOCKET NUMBER 87-268

The instant engineering statement has been prepared on behalf of Paramount Stations Group Inc., and is in support of Comments relative to the Second Further Notice of Proposed Rule Making in MM Docket Number 87-268 concerning advanced television systems and their impact upon the existing television broadcasting service.

The Second Further Notice sets forth certain planning factors looking toward the ultimate adoption of an Advanced Television System (ATV) Table of Allotments to supplant the existing National Television Systems Committee (NTSC) Table of Allotments. One of the proposed planning factors is the assumption of a maximum effective radiated power equivalent to the present NTSC 5000 kilowatts (kW) for UHF stations with an antenna radiation center height above average terrain of 366 meters (1200 feet). Hand in glove with that planning factor is the proposed adoption of the same minimum spacing requirements for the entire United States as will prevail for Zone I. This engineering statement demonstrates that the proposed minimum co-channel spacing requirements derived from these planning factors are likely to create ATV-to-ATV and NTSC-to-ATV co-channel interference where none exists today, and to needlessly constrict ATV service in Zones II and III.

Paramount is the parent of the licensees of two Zone I stations, WDCA-TV, Washington, DC, channel 20, and WTXF, Philadelphia, Pennsylvania, channel 29. The facilities employed by both WDCA-TV and WTXF are comparable to the maximum facilities contemplated

under the Second Further Notice. Hence, implementation of ATV service using the equivalent maximum contemplated facilities pursuant to the Second Further Notice should not result in any significant change in noise-limited coverage for either station. However, while co-channel separations prevailing for both stations under the current allocation scheme are adequate to provide essentially interference-free coverage within the respective Grade B contours, that may not be the case under the sample ATV allotment plan.

The sample plan contemplates several co-channel assignments in Philadelphia and Washington. (Second Further Notice, Appendix D, pp. D-7, D-27.) Philadelphia and Washington co-channel stations would approximately fit the proposed ATV-to-ATV co-channel separation of 200 kilometers (125 miles). The undersigned has reviewed the interference impact from a co-channel Philadelphia ATV operation on an ATV operation for WDCA-TV using an effective radiated power equivalent to the NTSC maximum of 5000 kW and antenna radiation center height above average terrain of 235 meters. The 235-meter value is the same as currently authorized for WDCA-TV. It is doubtful, as a practical matter, that greater height could be obtained.

Under the Second Further Notice plan, a spacing of 125 kilometers for a maximum facility ATV-to-ATV co-channel operation is expected to produce interference the same as from a minimally spaced Zone I NTSC station with maximum effective radiated power of 5000 kW and antenna radiation center height above average terrain of 366 meters (1200 feet). While the graphic depiction of coverage and interference is not submitted herein, the following results are germane. The NTSC Grade B equivalent of the WDCA-TV ATV noise-limited contour includes 6,071,800 persons in 15,770 square kilometers. The interference from the assumed NTSC equivalent Philadelphia co-channel ATV facility at a minimum NTSC Zone I separation of 155 miles affects 1,271,780 persons in 2480 square kilometers. The large population affected is attributable to the loss of a substantial portion of Baltimore from the interference due to the new Philadelphia ATV station. Thus, compared to the present NTSC operation, the ATV operation for WDCA-TV may

provide significantly less service than at present. Because of the particular juxtaposition of Baltimore in the path between Washington and Philadelphia, co-channel ATV Philadelphia-Washington combinations should be avoided.

The Second Further Notice sample allotment plan also contemplates a Washington, DC, ATV station on channel 29. Paramount's station WTXF operates on channel 29 in Philadelphia. A good probability is that during the transition scenario, co-channel ATV-NTSC operations will exist in Philadelphia and Washington on channel 29. Figure 1 graphically depicts the interference that may be expected to be caused to WTXF from an assumed maximum ATV co-channel operation at the site of WFTY, Washington, channel 50. In preparing the map of Figure 1, the 30 dB desired-to-undesired ATV-to-NTSC ratio set forth in the answer to Question 8 of the September 29, 1992, FCC document entitled: "Information Regarding Technical Assumptions used in the Second Further Notice of Proposed Rule Making in Docket Number 87-268," was used. An additional 8 dB allowance was made for the loss of Grade A service pursuant to the Third Notice of Further Proposed Rule Making in Docket Numbers 8736 and 8975; Docket Number 9175; and Docket Number 8976 (March 1951). That document defined Grade A and Grade B service and set forth the appropriate co-channel ratios for determining interference for NTSC stations.

The WTXF NTSC Grade A contour includes 6,317,600 persons in 14,430 square kilometers. The NTSC Grade B contour includes 7,925,000 persons in 23,900 square kilometers. The interference caused to WTXF's NTSC Grade A service by the anticipated co-channel ATV operation in Washington affects 657,170 persons in 3370 square kilometers and the Grade B interference includes 510,040 persons in 5000 square kilometers. Thus, a total of more than 1,167,000 persons will suffer degraded WTXF service during the transition period.

At present, WTXF suffers no co-channel interference. Hence, implementation of a co-channel ATV operation in Washington will adversely affect the viewership base for WTXF and all similarly situated stations while broadcasting in the NTSC format. Because of this prospect, the adopted allotment plan should avoid situations which create interference where none existed before.

Paramount also owns two stations in Zone II and two stations in Zone III, and each has facilities exceeding the power/height combination utilized for the new ATV allotment plan. Thus, each station will suffer a loss in audience as a result of the transition from NTSC to ATV, should the FCC adopt its proposal for uniform nationwide co-channel spacing requirements. In the instances of those stations in Zone III, additional losses may occur due to the plan's failure to adequately compensate for the unusual propagation conditions (ducting) that the present allocation scheme currently recognizes. Zone II and Zone III stations also could suffer additional losses since the new spacing minimum may result in greater interference than under the old NTSC minimum spacing.

To illustrate the loss of service that would occur based on use of the facilities contemplated by the Second Further Notice for the entire country, the maps of Figures 2 and 3 have been prepared. Figure 2 compares the present NTSC Grade B contour for Paramount's station KTXA, Arlington, Texas, with the noise-limited contour for the contemplated ATV equivalent to the NTSC maximum condition of 5000 kW at 366 meters. Since KTXA currently employs a directional antenna, a similar mode of operation was assumed for the prospective ATV operation. The table below compares the populations and areas within the respective contours. Station KTXA is located in Zone II. Solely because of the reduced maximum permitted facilities to accommodate the overly-conservative minimum co-channel spacing requirement, the conversion from NTSC to ATV will result in a reduction of 76,200 persons in an area of 4850 square kilometers receiving adequate service from KTXA.

	Present KTXA Grade B	Prospective KTXA ATV Noise-Limited
Population (1990 Census)	4,008,500	3,932,300
Area (sq. km)	25,300	20,450

Figure 3 compares the present NTSC Grade B coverage for Paramount's Zone III station, KTXH, Houston, Texas, with the noise-limited equivalent which will result if the maximum facilities contemplated for ATV are used uniformly throughout the country. The table below compares the populations and areas for the two contours. Under the Second Further Notice proposal, KTXH's noise-limited contour would serve 90,700 fewer persons in 5730 fewer square kilometers relative to the present NTSC Grade B coverage.

	Present KTXH Grade B	Prospective KTXH ATV Noise-Limited
Population (1990 Census)	3,769,500	3,678,800
Area (sq. km)	23,360	17,630

Furthermore, even though the Second Further Notice sample allotment plan claims that 80 percent of the allotments in the proposed ATV table are located such that the nearest co-channel allotment is more than 250 kilometers (155 miles) away, there is no assurance that interference intrusion within the noise-limited contour will not result in any particular Zone II or Zone III instance. Moreover, it has not been demonstrated what separation would be adequate to compensate for ducting effects at least comparable to the existing allotment plan. Hence, existing Zone II and Zone III stations which have facilities exceeding the contemplated maximum for ATV

may be doubly penalized by first suffering a basic loss in potential audience on a noise-limited basis and then by suffering interference over and above that which would be experienced under the present allotment separation scheme. Paramount advocates retention of the three-zone spacing scheme present in the NTSC allotment plan.

In preparing the studies herein, use was made of the FCC's F(50, 50) and F(50,10) propagation curves, Figures 10b and 10c, respectively, in Section 73.699 of the Rules. Population enumerations were performed on the basis of the 1990 U.S. Census employing a computer program which includes in the database the geographic coordinates for the centroids of population subdivisions. Areas were determined by use of a computer program which employs an area integration algorithm except in those instances where large water areas were involved. In those cases, the areas were determined by polar planimeter measurement taking into account the map scale factor. Other assumptions and methodologies employed have been explained in the text where appropriate.

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 12, 1992.

Bernard R. Segal

Bernard R. Segal, P.E.

Figure 1

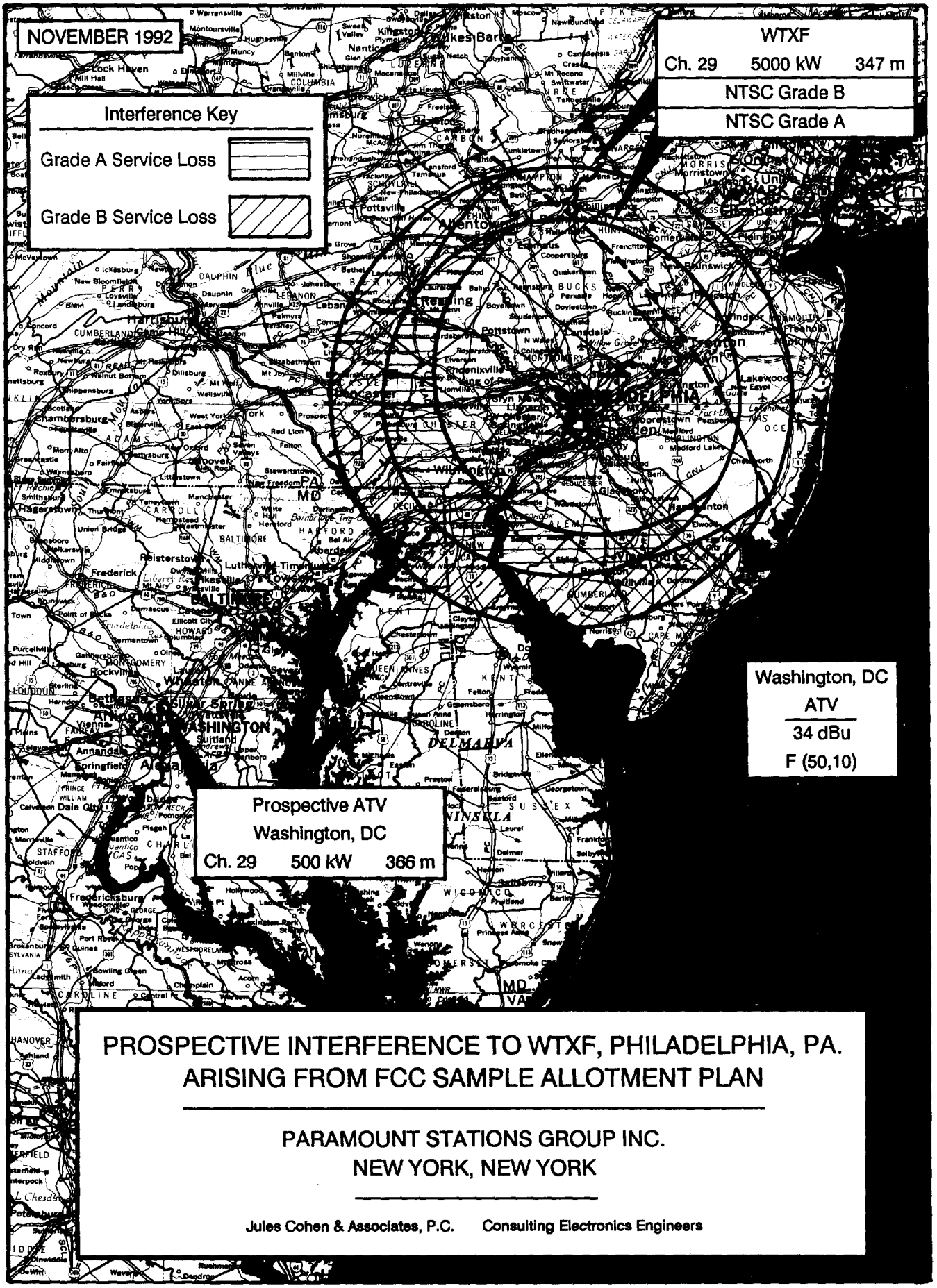

NOVEMBER 1992
Interference Key
Grade A Service Loss
Grade B Service Loss
WTXF
Ch. 29 5000 kW 347 m
NTSC Grade B
NTSC Grade A
Washington, DC
ATV
34 dBu
F (50,10)
Prospective ATV
Washington, DC
Ch. 29 500 kW 366 m
PROSPECTIVE INTERFERENCE TO WTXF, PHILADELPHIA, PA.
ARISING FROM FCC SAMPLE ALLOTMENT PLAN
PARAMOUNT STATIONS GROUP INC.
NEW YORK, NEW YORK
Jules Cohen & Associates, P.C. Consulting Electronics Engineers
10 0 20 40 60 80 100 MILES
10 0 50 100 150 KILOMETRES

Figure 2

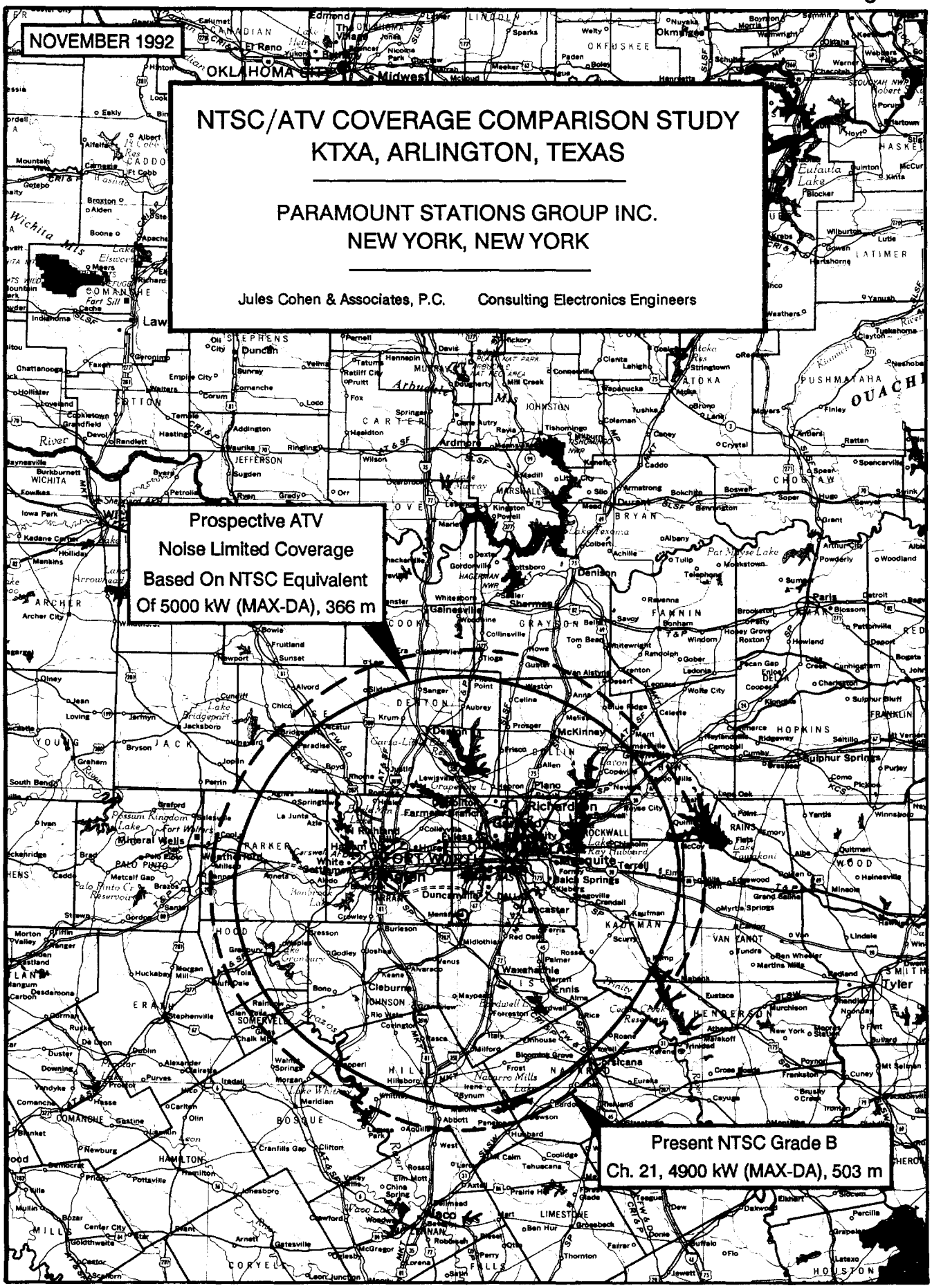
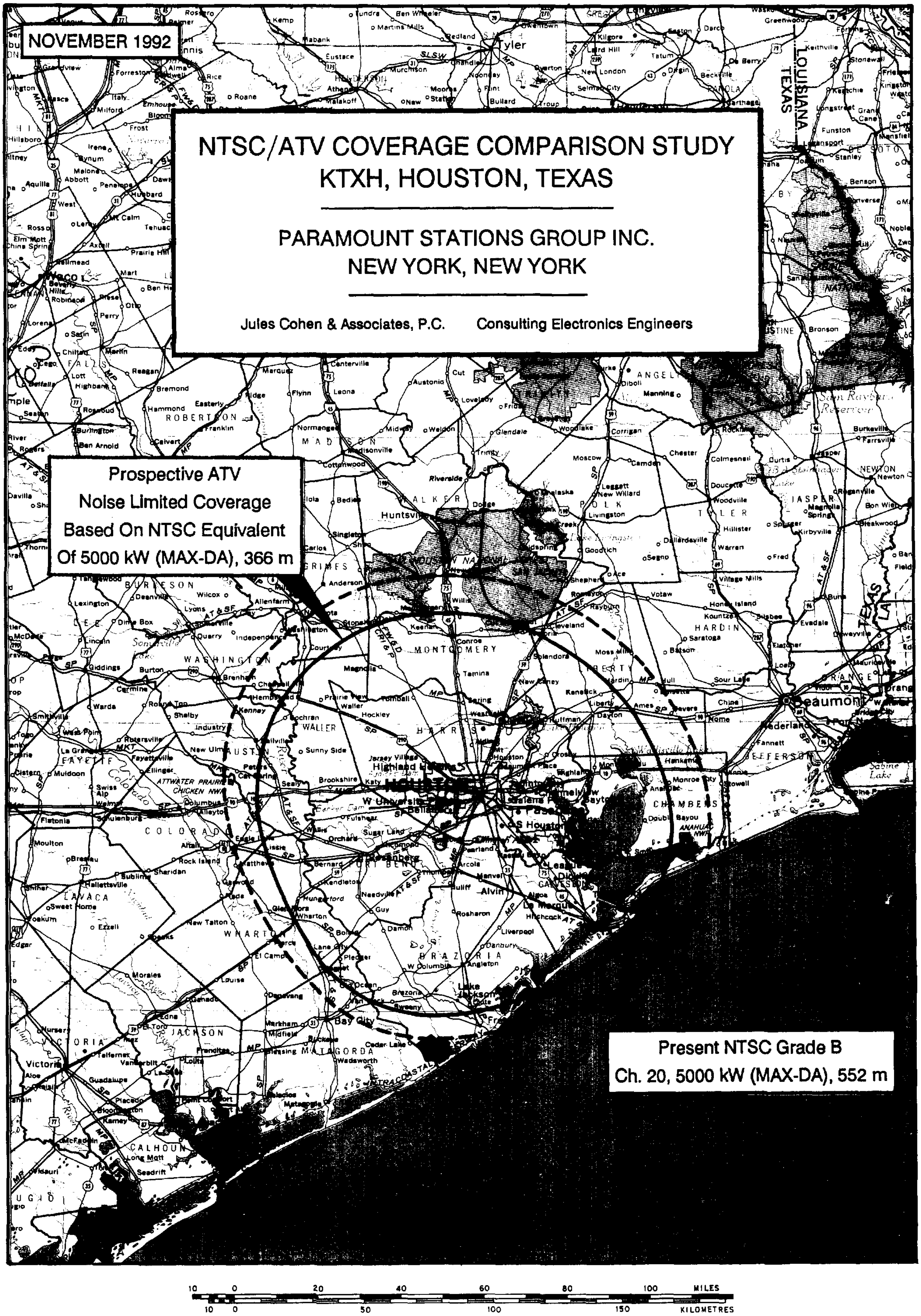

NOVEMBER 1992
NTSC/ATV COVERAGE COMPARISON STUDY
KTXA, ARLINGTON, TEXAS
PARAMOUNT STATIONS GROUP INC.
NEW YORK, NEW YORK
Jules Cohen & Associates, P.C. Consulting Electronics Engineers
Prospective ATV
Noise Limited Coverage
Based On NTSC Equivalent
Of 5000 kW (MAX-DA), 366 m
Present NTSC Grade B
Ch. 21, 4900 kW (MAX-DA), 503 m
10 0 20 40 60 80 100 MILES
10 0 50 100 150 KILOMETRES

Figure 3


NOVEMBER 1992
NTSC/ATV COVERAGE COMPARISON STUDY
KTXH, HOUSTON, TEXAS
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Jules Cohen & Associates, P.C. Consulting Electronics Engineers
Prospective ATV
Noise Limited Coverage
Based On NTSC Equivalent
Of 5000 kW (MAX-DA), 366 m
Present NTSC Grade B
Ch. 20, 5000 kW (MAX-DA), 552 m
LOUISIANA
TEXAS
10 0 20 40 60 80 100 MILES
10 0 50 100 150 KILOMETRES